

Claim Rejections – 35 USC Section 103(a)

Claims 1-13 have been rejected by the Examiner under 35 USC Section 103(a) as being unpatentable over Ottman (4,153,404), in view of Smith (2,537,920). Applicant respectfully traverses the Examiner's rejection, since the elements that make up Applicant's invention are not taught by either Ottman nor Smith—nor is there any teaching or suggestion to combine the elements of Ottman and Smith to produce an invention such as that disclosed by the Applicant in the present invention. Ottman discloses a forming apparatus for ice blocks. The Examiner is correct in stating that Ottman fails to disclose an apparatus with an indexing plate and a mixing means.

Smith does disclose an apparatus for forming granular material into blocks. Unlike the molding apparatus of the present invention, the apparatus of Smith utilizes compression along a single axis and displacement along a second axis, which is accomplished by means of one double-acting cylinder and two single-acting cylinders and pistons. Like Ottman, Smith does not disclose an indexing plate, but rather discloses an apron at the edge of the molding apparatus (33) for receiving blocks after they have been formed in the molding apparatus. Smith does not disclose an indexing plate for transporting the formed blocks. In fact, the specification of the '920 patent states that "formed blocks may be taken from the aprons 33 in any convenient manner for further handling or preparation, e.g., packaging" (column 3, lines 59-62). From the figures and the detailed description, it appears that the apron plate is no more than a surface at the end of the compression device. Briquettes come out near or onto the apron plate at each end of the device as a result of the positioning of the hoppers and the double-acting cylinder.

Unlike the granular solid used for forming briquettes according to the disclosure of Smith, the present invention compresses cement mix, which has a higher moisture content than a granular solid such as ground coal. In order to provide an apparatus that is capable of forming bricks or pavers that can be formed as a continuous process and collected in or on an indexing plate, the indexing plate and compression means are combined with a means for continuous mixing to facilitate the use of a crumb charge that can be compressed sufficiently to exceed relevant strength and absorption requirements. The combination of elements of the invention therefore eliminates the need for steam curing of the formed brick or brick paver.

For an invention to be obvious, there must be some teaching, suggestion, or motivation in the prior art to combine the elements of the invention. C.R. Bard Inc. v. M3 Sys. Inc., 157 F.3d 1340, 48 USPQ2d 1225 (Fed. Cir. 1998), In re Geiger, 815 F.2d 686, 2 USPQ2d 1276 (Fed. Cir. 1986). There is no teaching or suggestion within either of the cited patents to combine the elements of the present invention. Nor is there any motivation to combine these elements. Ottman provides a machine for compacting particles of ice to form a composite block, and Smith provides an apparatus for briquetting solid fuel such as coal. Neither teaches the use of an indexing plate or mixing means as disclosed in the present invention. Nor is there any motivation for one of skill in the art to combine these elements to form the present invention. By providing a mixer in conjunction with the elements to form brick using compression along a single axis in two directions, Applicant has overcome the need for steam curing that currently exists in the brick-molding machines of the art. This decreases both cost and production time, which has been a goal for the industry for some time. As the Examiner is aware, a long-

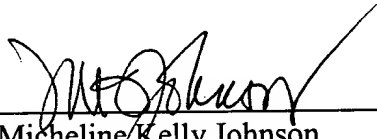
felt need in the art is an element of the Graham test for non-obviousness. Graham v. John Deere Co. 383 U.S. 1, 148 USPQ 459 (1966). Applicant has met this test by providing an apparatus that provides a manufacturing process that does, indeed, reduce both cost and production time while still producing a product that exceeds relevant strength and absorption requirements.

Applicant respectfully requests that the Examiner allow claims 1-13, including amended claims 9-11.

Respectfully submitted,

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MARKED-UP COPY OF AMENDED CLAIMS TO ACCOMPANY RESPONSE
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9. The continuous molding apparatus according to claim 2, wherein the indexing [brick or paver receiver] plate is positioned perpendicularly, between the front and rear ram faces, to multiple parallel molding units.
10. The continuous molding apparatus according to claim 2, wherein the indexing [brick or paver receiver] plate is positioned perpendicularly, between the front and rear ram faces, to multiple parallel molding units spaced 30 inches apart on center.
11. The continuous molding apparatus according to claim 9, wherein the indexing [brick or paver receiver] plate is 5 inches wide, 120 inches long, 3/8 inches thick and [may hold] holds 12 bricks or pavers when full.